Research Brief

Effective summer learning programs have emerged as a promising way to keep students from losing educational gains made during the school year. Preventing summer learning loss is important because it affects nearly all students to some degree. For example, research indicates that most students lose about two months' worth of math skills during a single summer.[1]

High-quality 21st Century Community Learning Centers (21st CCLC) summer programs hold promise for helping to close achievement gaps, as those hardest hit by summer learning loss are students from disadvantaged backgrounds (e.g., families with low income and educational attainment levels). These students are more likely than their more advantaged peers to lose reading skills during the summer break.[2] Further, summer programs can strengthen students' social-emotional skills, which play a role in academic success and college and career readiness. New research suggests that these skills can diminish over the summer, leaving students underprepared when it comes to important classroom behaviors like paying attention and working collaboratively.[3]

Across the nation, 21st CCLC programs are already partnering with schools and community groups during the school year, and these programs have the potential to create effective programming that keep learning alive all summer. This research brief describes the impacts of summer learning loss, ways effective summer program design and delivery can address it, and examples from 21st CCLC programs.

Achievement Gaps and Summer Learning Loss

Even before they enter kindergarten, children from disadvantaged backgrounds can lag behind their peers academically. Schools face the challenge of addressing these achievement gaps, which are substantially caused by unequal access to learning resources outside the school setting.[5] This situation is particularly troubling because poor mathematics and literacy skills at the kindergarten level are strong predictors of poor performance later in school.[6]

The effects of achievement gaps are strongest during the elementary years. During the summer months, the mathematics and literacy skills of disadvantaged students decline significantly, while the literacy skills of their more advantaged peers may actually improve slightly. During the school year, although disadvantaged students underperform in absolute terms, their academic skills actually improve more rapidly than those of other students.[7] This finding highlights the importance (and potential benefit) of improving opportunities during out-of-school time.

Academic skills are not the only ones that fade during the summer. Students can also fall behind in areas such as following directions, attentiveness and organizational skills, and interpersonal skills such as sharing or working with others.[8]

Impacts of Summer Learning Loss[4]

Reading

Disadvantaged students lose about two months of reading skills during the summer, while more advantaged students make slight gains.

By the end of grade 5, summer learning losses can add up, putting some students as much as three years behind their peers in reading.

Math

Regardless of socioeconomic status, most students lose about two months of mathematics skills during the summer.

 This resource was funded by the U.S. Department of Education in 2016 under contract number ED-ESE-14-D-0008. The views expressed here are not necessarily those of the Department or the contractor. Learn more about professional development planning and 21st CCLC learning at https://y4y.ed.gov.

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Over time, as summer learning losses accumulate, they can play a role in student outcomes in high school and beyond. Research suggests that cumulative losses prior to ninth grade contribute to low achievement scores upon high school entry. Low scores at this critical point can, in turn, affect high school course placements, and they are also associated with reduced rates of high school completion and college attendance. Additionally, low student achievement can influence the thinking of parents, teachers, counselors and students themselves as they consider academic prospects.[9]

The Power of Summer Learning Programs

Fortunately, evidence shows that summer learning loss can be overcome. Young people don't lose their curiosity and interest during the summer. When given opportunities to explore and engage in effective summer learning programs, they may actually improve their academic skills more rapidly than during the school year.[11] This holds true of programs aimed at bringing students' skills up to grade level, and of those aimed at helping students go above and beyond expectations. The effect may be particularly strong for the most disadvantaged students, making summer an invaluable opportunity to narrow achievement gaps.[12]

Many studies demonstrate the power of summer learning programs. In a trial of kindergartners and first graders who had been labeled by their school district as "struggling readers," participation in a summer reading program moved them to the "low risk" or "established reader" categories, while their control group peers showed slight losses in literacy skills over the summer.[13] Such programs have the greatest power when students attend them regularly for more than one year. One multiyear program in Baltimore improved the reading skills of students who regularly attended by as much as half of one grade level. A study of programs in five urban school districts around the nation found that similar improvements can be achieved with mathematics skills; teachers reported that students who participated in the summer programs entered school in the fall better prepared than their nonparticipating peers.[14]

Professional Development Plays a Role

Providing high-quality summer learning programs in a 21st CCLC setting can benefit students and program staff. An example is a program operated by the Providence After School Alliance.[10]

In the AfterZone Summer Scholars program, students get real-world experience in STEM fields (science, technology, engineering and mathematics). Professional educators and volunteers from local museums and institutions work together to design and deliver the program's four-week curriculum.

Research on the program's effects has shown that participants make significant improvements in critical thinking skills, maintain mathematics skills, and are more prepared to start learning in the fall than nonparticipating peers.

The program also offers meaningful professional development opportunities for 21st CCLC practitioners. They reported that participating enabled them to better support youth development, improved their communication skills and helped them develop community connections.

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In addition to providing academic benefits, summer learning programs can help bridge the opportunity gap by offering students experiences their families can't afford to provide.[15] Such programs can help to equalize access by engaging students in enrichment activities that enable them to explore the arts, music, science and athletics; some programs also include field trips to museums, libraries, zoos, farms, theaters or other community institutions. Exposing students to new activities and giving them hands-on experiences can deliver notable benefits.

You for Youth (Y4Y) Summer Learning Resources
The U.S. Department of Education provides information and resources on the critical roles of summer and enrichment in children's learning at https://y4y.ed.gov/summerlearning. Visit the site for more ideas about supporting summer learning through fun enrichment activities!

Designing Effective Summer Learning Programs

Effective summer learning programs come in shapes and sizes as varied as the schools and communities they serve. According to research, the following tips have universal value in helping program directors create a program that meets student needs:[16]

- Plan for success by starting early. Begin in September, if possible, and no later than January.
- Be intentional about designing the curriculum and choosing instructional strategies. Include a focus on academic time, and support small-group and individualized instruction.
- Recruit qualified staff, and provide initial training and ongoing professional learning opportunities.
- Identify community partners who can support program goals and help to leverage resources.
- Offer engaging enrichment activities that make students excited to come to the program.
- Provide a family orientation event and ongoing family engagement activities.

Delivering Effective Summer Learning Programs

Practitioners at summer learning programs can help students develop the skills they need to succeed in school, college and career. While the approach to providing engaging learning will be influenced by the design and circumstances of each program, the evidence-based practices described below are useful for all programs. These practices align with the framework of a widely used, research-based tool from the Weikart Center that helps program leaders determine the quality of summer programming.[17] Each practice is accompanied by one or two tips that demonstrate its application in the field.

1. Create a safe and healthy environment.

Encourage positive behaviors and respect for all, regardless of background or ability. Know and adhere to state and local requirements that aim to protect physical safety, including emergency procedures.

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In the Field … With Daryle Rodgers, Coordinator, Out-of-School-Time, Hampton City Schools
Students went to SkyAnchor [a nonprofit "spiritual outdoor center"] and completed a disability awareness challenge course that simulated disabilities such as blindness, dyslexia and deafness. It helped students think about others' experiences.

2. Create a supportive environment.
Help young people feel confident about and interested in learning:

- Develop a smooth, consistent program flow with clear instructions and enough time and materials for everyone to participate.
- Offer variety by mixing academics, physical activities and free play, and by making all activities accessible to children with a range of abilities.
- Promote active learning so students can engage physically and mentally with materials or ideas and improve their skills through guided practice. Encourage young people to talk about their ideas and build communication skills as they work.
- Help students develop skills by explaining what an activity will involve, breaking difficult tasks into steps, and adjusting difficulty for students of varying ability levels.

In the Field … With Mark Emery, Administrator, After-School Programs, Fairfax County Public Schools
One component of our 21st CCLC summer programs is a High School Transition [HST] program for rising ninth graders. The one-week program is designed for students receiving special education or English language learner services. Teams of teachers, administrators, counselors and students put in place a structure where freshmen get support to start their high school experience on a positive note. HST focuses on the two most difficult aspects of this transition: academic work and social organizational changes. Activities demonstrate the realities of the high school experience, dispel myths and answer questions so students know what to expect and can begin to think about and plan their academic futures.

3. Encourage interactions that promote belonging, collaboration and leadership.
Help students build their social-emotional and interpersonal skills:

- Provide structures that help students get to know one another.
- Establish a culture that values ideals and principles and integrates them into daily activities.
- Assign roles and responsibilities within group activities. Also, give young people opportunities to partner with adults and share control of activities.

In the Field … With Heather Belanger, Expanded Learning Resource Coordinator, Rochester City School District, School #45
We had a strong social-emotional focus. Our partner, Roots, went into classrooms twice a week with activities about getting to know yourself and learning about others. For younger students, our partner, Center for Youth, did activities focusing on The Leader in Me. It was really helpful to be able to have our community partners with us during summer because they're already familiar with what we do during the school year.

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4. Know about and support student engagement in learning.

Use strategies that help students lower frustration, raise interest in learning, and take charge of their own learning:

- Give students choice and voice about topics to explore and activities to try.
- Support students as they develop learning strategies that help them take initiative and persist in solving problems.
- Ask guiding questions that encourage reflection to help students determine what worked, what didn't work and why, and what to try instead. Explain that practice does make a difference in mastering skills, so errors are not the same as failures.
- Introduce higher-order thinking skills by asking students to analyze problems, compare them to other problems, develop predictions and come up with alternate solutions.

In the Field … With Daryle Rodgers, Coordinator, Out-of-School-Time, Hampton City Schools

In our "Shark Tank" activity, students design a product and go in front of a community panel to try to sell their ideas. This year, one group created a board game, and a local business actually wants to work with them to put it into production.

5. Incorporate mathematics and literacy into program activities.

Help students make connections between core academic areas and their daily lives:

- Present math problems in familiar contexts that link concepts to real-world activities such as sports and games.
- Communicate mathematical information both verbally and nonverbally, using graphs, charts, symbols and so on.
- Discuss the meanings and uses of words to build students' vocabulary. Ask questions about what specific words mean, and explore other words that might communicate the same ideas.
- Incorporate a range of literacy activities such as individual and group reading, word games, creative writing and book discussions.

In the Field … With Daryle Rodgers, Coordinator, Out-of-School-Time, Hampton City Schools

We do "sport science." A unit on basketball had students do a lot of measurements and learn about angles. We also explored jumping — measuring how far you can jump from different surfaces. We tied that to the Olympics.

In the Field … With Heather Belanger, Expanded Learning Resource Coordinator, Rochester City School District, School #45

The purpose of the "Reading, Leading, and Writing" summer program is to develop students' writing skills. We used the Lucy Calkins model, which includes reading and writing workshops. Kids used self-assessment checklists to see how well they were incorporating various elements into their writing. Their final work was to write a piece about something from their life. The narrative focuses on writing about "small moments" — picking one moment and stretching it out.

Notes

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[3] Ibid.

[4] Ibid.

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